



QC ABSTRACT

NAME OF WORK: Construction of Concrete Retaining Wall and Other Civil Works to Mallasandra Colony School in Ward No 13 Shettyhalli Sub Division

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
Materials						
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeability method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
3	Coarse aggregate(20 mm down size)	Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Block(400*150*200)	BLOCK DENSITY	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		DIMENSION ANALYSIS	One Test		1	1
		COMPRESSIVE STRENGTH	One Test		1	1
7	RCC(M25)	Compressive Strength(7days and 28days)	2 set /6-15 cum	7.42	4	4
8	Cement Concrete Pavement (M30)	Compressive Strength(7days and 28days)	5 set /51-100 cum	55.76	10	10
9	Mortar Sand	Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		Compacted Bulk Density	One Test		1	1
		Loose Bulk Density	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
10	Plaster Sand	Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
		SIEVE ANALYSIS	One Test		1	1

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅಭಿಯಂತರರು

ಶಿಬಿರಕು ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ನಗರ

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**HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |**

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2020-07-17-37 **Date:** 29-05-20

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Construction of Concrete Retaining Wall and Other Civil Works to Mallasandra Colony School in Ward No 13 Shettyhalli Sub Division

Agency : M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010

Customer's Reference : EE/DD/W.O/533/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-05-20

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2,3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, DETERMINATION OF DENSITY , Clause 6

Date of test : 27-05-20

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.46	—
2	Fineness by Air permeability method (m ² /kg, Min)	255.8	225m ² /kg, Min
3	Density (gm/cc)	3.12	—
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	280 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
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Samples will be disposed after 90 days from the date of issue of test certificate

ಶ್ರೀ ಕಾರ್ತಿಕ ರೆಚನ್

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ವಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು-560010

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[Signature]
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2020-07-17-37 **Date:** 24-06-20

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Construction of Concrete Retaining Wall and Other Civil Works to Mallasandra Colony School in Ward No 13 Shettyhalli Sub Division

Agency : M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010

Customer's Reference : EE/DD/W.O/533/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-05-20

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 6, Determination of Compressive Strength, Clause 6

Date of test : 27-05-20

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Compressive Strength			
Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm ²	Not less than 27 N/mm ²
2	7 Days	39.0N/mm ²	Not less than 37 N/mm ²
3	28 Days	58.5N/mm ²	Not less than 53 N/mm ²

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TEST REPORT ON COARSE AGGREGATES

Lab ID

: CP-2020-07-17-37

Date: 29-05-20

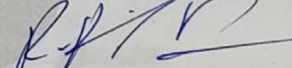
PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.6	
3	Specific Gravity	2.69	—
4	Bulk Density(Loose) (Kg/l)	1.54	—
5	Bulk Density(Compacted) (Kg/l)	1.58	—
6	Water Absorption(%)	0.24	—

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****End of Report****

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

TEST REPORT ON PHYSICAL REQUIREMENTS OF SOLID CONCRETE BLOCKS

Lab ID : CP-2020-07-17-37 Date: 06-06-20

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Construction of Concrete Retaining Wall and Other Civil Works to Mallasandra Colony School in Ward No 13 Shettyhalli Sub Division

Agency : M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010

Customer's Reference : EE/DD/W.O/533/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 03-06-20

Sample Type/Size : Solid concrete blocks size (400X150X200)mm

Reference to BIS codes : IS : 2185 (Part 1) : 2005(RA 2010) Concrete Masonry Specification
Part 1:Hollow and Solid Concrete Blocks (Dimensions -Annex-B, Clause 9.2 and 10 , Block density Annex -C Clause 9.3 and 10, Compressive strength Annex -D Clause 9.4 and 10, Water absorption Annex -E Clause 9.5 and 10)

Date of test : 03-06-20

BLOCK DENSITY:

Sl. No.	Measurement of overall Dimensions of Individual Blocks			Overall Volume of the Block in Cubic Centimetres	Weight of Oven Dried Block in Kilograms to the nearest 10 Gram	Block Density in Kg/cum*10 ⁶	Avg. Block Density in (Kg/cum)	As per IS 2185(Part 1) :2005 (RA 2010)
	Length	Breadth	Height					
	mm	mm	mm	(Cm ³)	Kg	Kg/m ³	Kg/m ³	
1	404	151	200	12201	33.262	2726.2	2730.7	Not less than 1800Kg/m ³
2	405	152	198	12189	33.870	2778.8		
3	403	153	199	12270	32.971	2687.1		

WATER ABSORPTION:

Sl. No.	Wet weight after water absorption	Dry weight (Oven dry)	Water Absorption	Avg. Water Absorption	As per IS 2185(Part 1):2005 (RA 2010)
	kg	kg	%	%	
1	33.91	32.25	4.89	4.25	Shall not be more than 10% by mass
2	33.57	32.14	4.28		
3	33.44	32.24	3.59		



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TEST RESULTS OF STEEL

Lab ID : CP-2020-07-17-37 **Date:** 27-05-20

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Construction of Concrete Retaining Wall and Other Civil Works to Mallasandra Colony School in Ward No 13 Shettyhalli Sub Division

Agency : M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010

Customer's Reference : EE/DD/W.O/533/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-05-20

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.

Date of test: : 26-05-20

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

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